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SIMPSON ELECTRIC COMPANY

Simpson

INSTRUMENTS

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manual # 2

INSTRUCTION MANUAL
MODEL 2755
TEN CHANNEL
EVENT RECORDER

TWO SPEEDS
INTERNAL CHART TAKE-UP
PORTABLE OR PANEL MOUNTING

Simpson

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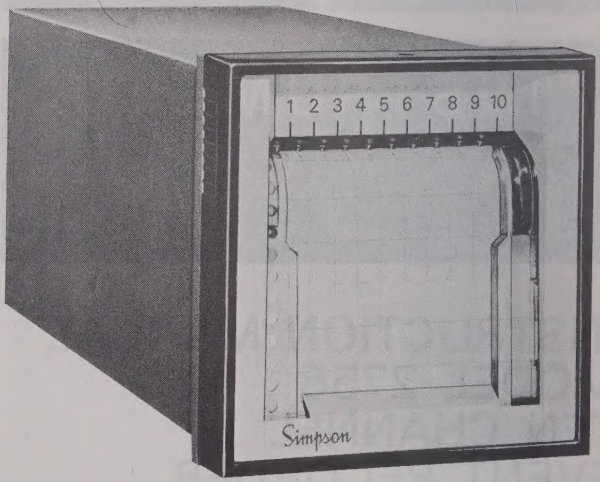

FIG. 1 MODEL 2755 EVENT RECORDER

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GENERAL DESCRIPTION

The Simpson Model 2755 event recorder marks the time and sequence of electrical changes. It is ideal for use on machine tools, industrial installations, furnaces and other applications.

Ten channels are available for continuous simultaneous recording. A solenoid for each channel causes the stylus for that channel to move (at a right angle to the chart's direction of motion) to its appropriate position. There are two positions for each stylus, each corresponding to current "ON" or "OFF" in its solenoid.

SOLENOID INPUT

Activating voltages are 22-26 volt DC and 105-127 volts AC. Solenoids for different activating voltages can be mounted within the same recorder on special order. Units for use on 6, 12, 40 or 60 volts DC, or 6, 12, 24, 40, 60, 220 or 240 volts AC can be supplied.

RECORDING SYSTEM SPECIFICATIONS

Recorder: Continuous recording, 10 input channels. When operated each stylus moves .04" at a right angle to the direction of chart travel.

Motor Drive: Self-starting synchronous motor 120V, 60 Hz contained in recorder. A grounded line cord is provided with the recorder.

Chart Speed: With the standard gear unit the chart speed is 20 mm/hour. (20 mm = .79"). This speed may be changed to 120 mm/hour by moving the gear change lever located on the right-hand side of the chart drive unit. The gear change lever is used to provide a 6:1 speed selection with any gear unit. Gear units are quickly and easily changed to provide chart speeds of up to 3600 mm/hour. See section on ACCESSORIES for list of available gear units.

Chart Paper: Pressure sensitive type, width of recording: 2.32" (2.33" = 59 mm), length of paper on roll: 50' (50' = 15.5 m).

OPERATING INSTRUCTIONS

Opening and Closing the recorder: (See Fig. 2) The model 2755 recorder has a phenolic cover with glass window which is held to the case by a spring catch. To open, grip the fluted edges of the cover firmly, pull out at the top and lift slightly to disengage cover from case. When closing, be sure to place the two projections on the bottom of the cover into the corresponding holes in the case. Then push the top of the cover in to engage the spring catch. To prevent unauthorized opening of the recorder, a wire seal may be used in the holes (3) in the upper right hand corner of the case.

Locking lever: With the cover removed, a locking lever (4) will be found located in the upper right hand corner of the case. When the locking lever is pushed down in line with the green section (5) on the label, the motor is switched on and the chart drive unit is locked in the case. When the lever is pushed up in line with the red section, the chart drive unit is unlocked, and the motor is switched off. At this time the chart drive can be pulled out of the case for replacing the chart roll or changing the chart speed.

Insertion of chart paper: (See Fig. 3) After having removed the phenolic cover, place locking lever in line with red mark (6). Use finger holds (7) to pull out chart drive unit until spring catch engages, and then tilt the unit forward. The feed spool (8) and the take up spool (11) are now accessible. These two spools are inserted in slots (9), (12) at the sides of the chart drive unit. They are kept in working position by means of spring catches (10), (13).

For proper insertion of new chart paper the following step by step instructions should be followed closely:

1. The feed spool (8) should be taken out with one hand, while the other hand keeps the chart drive unit from sliding back into the case. To disengage the spring catches (10), get a firm grip on the feed spool and press at a right angle to the slot against the spring catches. With the spring catches disengaged, the feed spool will slide easily out of the slots.

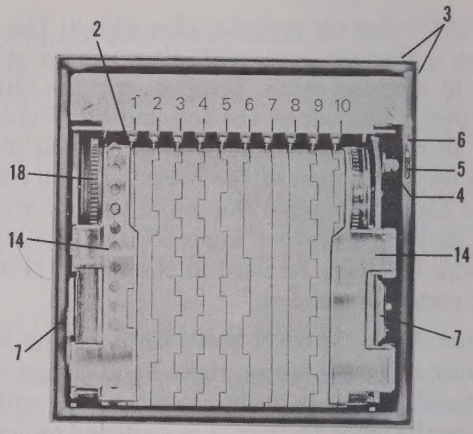


FIG. 2 MODEL 2755 RECORDER, OPEN

2. Stylus

3. Drilled holes for wire seal

4. Lever to switch motor, and disengage chart drive

5. Green mark: Motor switched on and chart drive locked

6. Red mark: Motor switched off, chart drive released

7. Finger grips for pulling out the chart drive

14. Hinged chart guide

18. Knurled wheel for chart drive roller

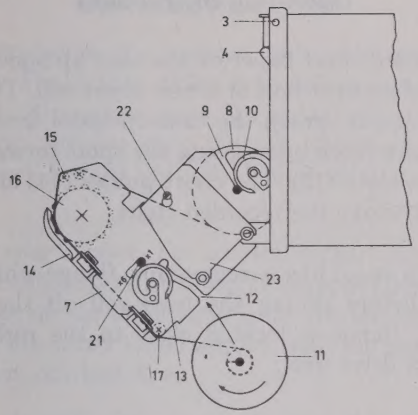


FIG. 3 CHART DRIVE PULLED OUT AND TILTED

3. Drilled holes for wire seal
4. Lever to switch motor, and disengage chart drive
8. Feed spool
9. Slot for axle of feed spool
10. Spring catch for axle of feed spool
11. Take-up spool
12. Slot for axle of take-up spool
13. Spring catch for axle of take-up spool
14. Hinged chart guides
15. Recording edge
16. Chart drive roller
17. Chart guide bar
21. Gear change lever
22. Fastening screw for gear unit
23. Gear unit

2. If there is used chart paper on the take up spool, it must be removed before insertion of a new chart roll. To remove the used chart paper, grasp the take-up spool from below, disengage spring catch by pressing the spool forward, and slide it out of the slots (12). The chart guides (14) should now be opened to remove the recorded chart.

3. The take-up spool has a removable flange which has to be pulled off before sliding the used roll off the spool. This removable flange is located close to the right hand side of the chart drive unit.

4. Install chart roll with the perforations on the flange side and slide it against the flange. When reinserting feed spool, check for correct position (perforations on the left). Pull off about 8 inches of paper from feed spool and cut the end to a tapered point. (See Fig. 7) With chart guides open, insert the chart so that the pins of the chart drive roller engage the perforations of the paper.

   After replacement of the removable flange, the pointed end of the chart is inserted into the slot on the take-up spool with the front side of the chart facing the inside of the spool and the perforated side of the chart strip touching the flange with the pinion gear. Wind a few turns on the spool to prevent the chart from disengaging. Close chart guides, tilt chart drive unit up and slide into case. Push locking lever down in line with green section and replace cover. When reinserting take-up spool, make sure that the removable flange is on the right-hand side of the chart drive. Tighten chart by turning knurled flange on feed spool.

Adjustment of time scale on chart: For this operation remove the cover as described. Turn knurled wheel of drive spool until desired time line coincides with position of pins.

Gear unit exchange: To remove gear unit from chart drive loosen screw Fig. 3 (22). Slide gear unit up and tilt it out at the bottom to disengage gears. To install gear unit engage the slots over the corresponding pins on the chart drive, making sure that gears engage properly before locking gear unit with screw (22).

Selection of chart speed: For a specific chart speed select gear unit with indicated speed on label. If the speed desired is marked in parenthesis on the label place gear change lever in position marked X 6. The other speed applies with the gear change lever in the position marked X 1.

PORTABLE OPERATION

With the carrying handle attached the model 2755 can be used as a portable recorder.

CONNECTIONS

The terminals are located on the back plate of the recorder. Two terminal strips with 10 terminals each are marked with numbers 1 to 10. One lead of each solenoid coil is connected to its correspondingly numbered terminal on the strip. Input leads to each channel are connected to the numbered pairs on the terminal strips.

(See Fig. 4). To install the special line plug to the recessed line terminal, marked 60Hz, 100 . . . 127V, remove screws from the two protruding studs with a screwdriver. Insert the line plug and replace the screws and washers to hold plug in place. The third lead of the line cord is connected to the grounding terminal marked . To do this remove grounding screw, place washer and terminal lug of grounding lead over it, and reassemble making sure that good connection is made to the grounding terminal of the case.

PANEL MOUNTING

The model 2755 recorder is designed for use in the vertical position. The recorder is normally mounted on a panel. A mounting bracket is furnished with each unit. (See Fig. 5 for the dimensions of the recorder and the panel opening.)

RECORDING WITH FREE CHART EXIT

For recording without a take-up reel, an accessory clear molded acrylic cover is available. A snap-out section is provided in the bottom of the cover to allow for free exit of the chart. The chart paper may easily be torn off and saved for permanent record.

MAINTENANCE

The 2755 recorder requires little maintenance. Every 1000 hours, lubrication of the drive bearings with light oil such as 3 in 1 or sewing machine oil is recommended. Deposits of dust on the scale should be removed from time to time with a soft brush.

ACCESSORIES

Gear Units: The standard gear unit supplied with the 2755 has a speed of 20/120 mm/hour. Five high speed gear units are available: 30/180 mm/hour, 60/360 mm/hour, 100/600 mm/hour, 300/1800 mm/hour, and 600/3600 mm/hour.

GEAR UNIT CATALOG NUMBERS

Speed mm/hour	20/120	30/180	60/360	100/600	300/1800	600/3600
Catalog #	22300	22301	22302	22303	22304	22305

Chart Paper: The charts for the event recorder have 10 channel marks. The time marks on the charts vary according to chart speed. For the standard speed a chart roll with the Catalog #22380 is used. The following table can be used to select the proper chart paper catalog numbers. On all charts the time is marked in hours except those for 100/600 mm/hour are marked 0-9.

CHART PAPER CATALOG NUMBERS

Chart Speed mm/hour	20/120	30/180	60/360	100/600
Catalog #	22380	22381	22382	22383

(Supplied in quantities of 10 rolls per box)

NOTE

Model 2755 recorder is supplied with two rolls of chart paper.

Other Accessories:

	Catalog #
Panel mount bracket Mounting frame for panel mounting	22391
Portable carrying handle	22392
Line cord — 3 wire, 120 volt plug	22393
Line cord — 3 wire pigtail	22394
Plastic window (for free chart exit)	22395
Glass window with phenolic frame for Model 2755	22397

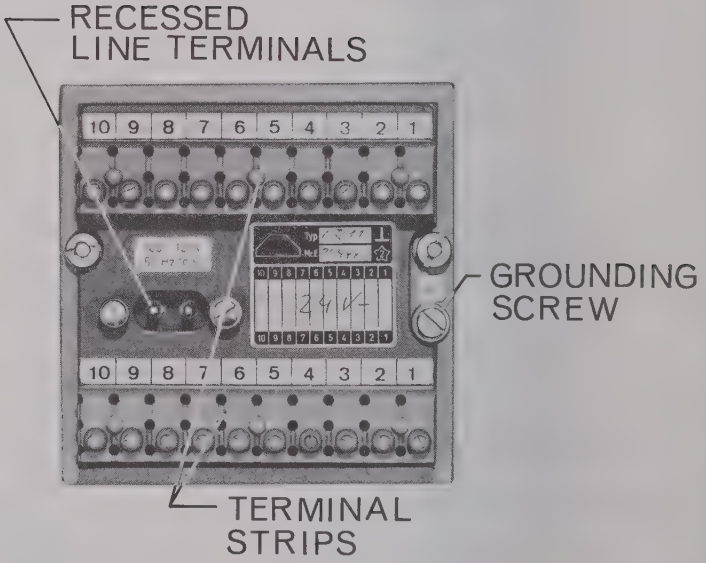
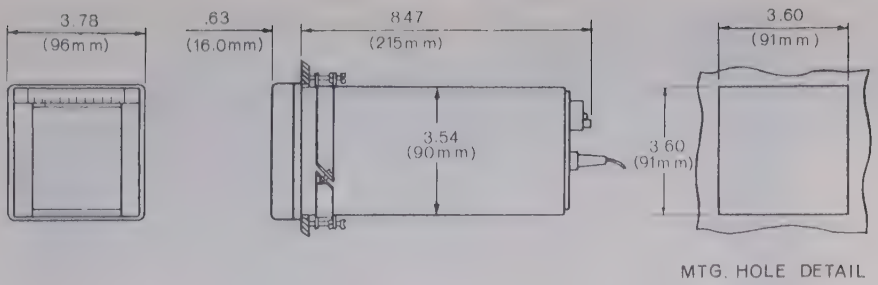


FIG. 4 TERMINALS ON BACKPLATE



Dimensions in inches 1" = 25.4 mm
Dimensions in parentheses (mm) 1mm

96 mm = 3.78"
+ 1 .04
91 mm = 3.58" + .0394"

215 mm = 8.47"

FIG. 5 DIMENSIONAL DIAGRAM

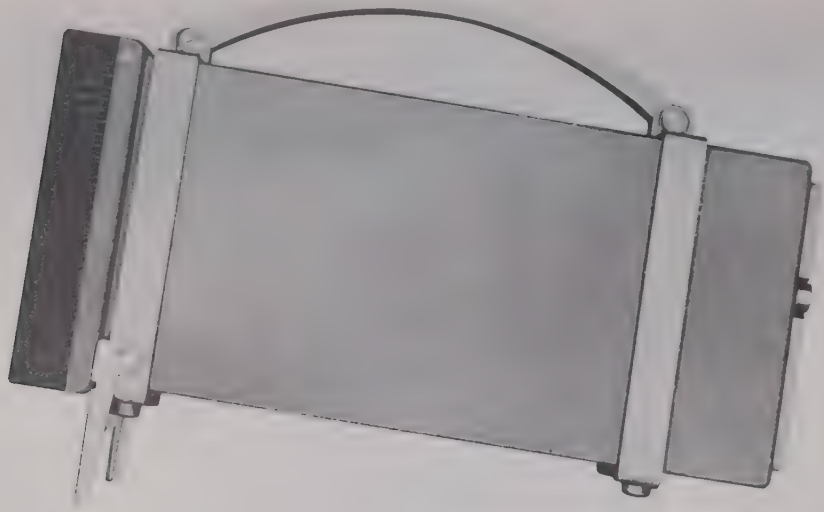


FIG. 6 MODEL 2755 WITH CARRYING HANDLE

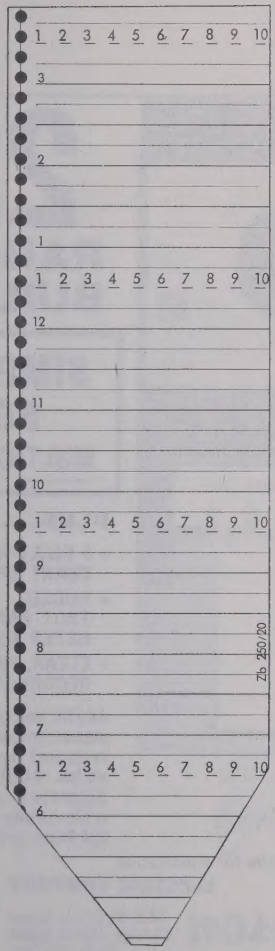
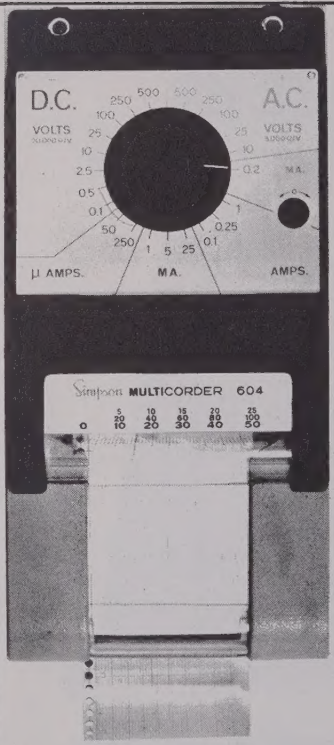


FIG. 7 CHART PAPER, CUT TO TAPERED POINT



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